

**MULTI-LEVEL CONFIDENCE MEASURES FOR TASK MODELING  
AND ITS APPLICATION TO TASK-ORIENTED MULTI-MODAL  
DIALOG MANAGEMENT**

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**ABSTRACT OF THE DISCLOSURE**

10 A method and system (102) is provided for a multi-modal task-oriented dialog management implemented on a computer-based system. The system (102) maximizes the probability of successful task completion after a task is requested (302). Every task is associated with a task model comprising recipes, acts, parameters and modalities. Confidence measures are calculated at various levels for each task. The confidence measures represent the probability of success of the action depending on the user preferences. The most suitable recipe, act, parameter and modality are selected at runtime using the provided confidence measures (304) to maximize the probability of task completion. After each act, confidence measures are modified (312) depending on the user response, and the next suitable act is accordingly selected. Optionally, a post evaluation module (PEM) is provided for monitoring the user response and modifying the formulation for the confidence measures calculation.

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Fig. 3 accompanies this abstract.